

IN THE CLAIMS

1. (Previously Presented) An electron-emitting device comprising:
a pair of conductors provided on a substrate so as to be opposed to each other; and
a pair of films containing carbon as a main component which respectively connected to the pair of conductors and disposed with a gap therebetween,
wherein sulfur is contained in the deposition film in a range of not less than 1 mol% and not more than 5 mol% as a ratio to carbon.
2. (Previously Presented) An electron-emitting device comprising:
a pair of device electrodes provided on a substrate so as to be opposed to each other;
an electroconductive film which is connected to the pair of device electrodes and has a fissure between the pair of device electrodes; and
a film containing carbon as a main component which is formed in the fissure and on an area including the fissure and has a gap whose width is narrower than the fissure in the fissure,
wherein sulfur is contained in the film containing carbon in a range of not less than 1 mol% and not more than 5 mol% as a ratio to carbon.
3. (Previously Presented) An electron source comprising:

a plurality of electron-emitting devices as defined in claim 1 or 2
which are provided on a substrate; and

a wiring connected to a plurality of the electron-emitting devices.

4. (Previously Presented) An image-forming apparatus comprising:
an electron source as defined in claim 3; and
an image-forming member for forming an image by collision of an
electron emitting from the electron source.

5. (Previously Presented) An electron-emitting device comprising a
carbon film composed mainly of carbon, and an electrode electrically connected to the
carbon film, wherein sulfur is contained in the carbon film in a ratio of 5 mol% or less with
respect to carbon.

6. (Previously Presented) An electron-emitting device comprising:
a carbon film composed mainly of carbon, and
an electrode electrically connected to the carbon film,
wherein sulfur is contained in the carbon film in a ratio of from
1 mol% to 5 mol% with respect to carbon.

7. (Previously Presented) An electron-emitting device comprising:
a pair of electroconductors disposed on a substrate; and

a pair of films connected to the pair of electroconductors,
respectively, disposed with a gap therebetween and containing carbon as a main
component,

wherein sulfur is contained in said films in a ratio of 5 mol% or less
with respect to carbon.

8. (Previously Presented) An electron-emitting device comprising:
a pair of device electrodes disposed on a substrate;
an electroconductive film connected to the pair of device electrodes
and having a first gap between the pair of device electrodes; and

a film containing carbon as a main component, said carbon film
being disposed on the electroconductive film and having a second gap, located within the
first gap, said second gap being narrower in width than the first gap,

wherein sulfur is contained in the carbon film in a ratio of 5 mol% or
less with respect to carbon.

9. (Previously Presented) An electron-emitting device comprising:
a pair of device electrodes disposed on a substrate so as to face each
other;

an electroconductive film connected to the pair of device electrodes
and having a first gap between the pair of device electrodes; and

a film containing carbon as a main component, said carbon film being disposed on the electroconductive film and having a second gap, located within the first gap, said second gap being narrower in width than the first gap,
wherein sulfur is contained in the carbon film in a ratio of from 1 mol% to 5 mol% with respect to carbon.

10. (Previously Presented) An electron source comprising a plurality of electron-emitting devices according to any one of claims 5 to 9, wherein said devices are disposed on a substrate, and wirings connected to said electron-emitting devices.

11. (Previously Presented) An image-forming apparatus comprising an electron source according to claim 10, and an image forming member.

12. (Previously Presented) An electron-emitting device comprising:
a carbon film composed chiefly of carbon; and
an electrode electrically connected to the carbon film,
wherein sulfur is contained in the carbon film in a rate of 1 mol% or more with respect to carbon.

13. (Previously Presented) An electron source comprising:
a substrate;

a plurality of electron-emitting devices disposed on the substrate, each electron-emitting device being an electron-emitting device according to claim 12; and wirings connected to the electron-emitting devices.

14. (Previously Presented) An image-forming apparatus comprising an electron source according to claim 13, and a phosphor.

15. (Canceled)

16. (Canceled)

17. (Canceled)